

INCH-POUND

MIL-S-19500/419(ER)  
AMENDMENT 2  
29 June 1990  
SUPERSEDING  
AMENDMENT 1  
21 May 1969

MILITARY SPECIFICATION

SEMICONDUCTOR DEVICE, THYRISTOR (CONTROLLED RECTIFIER), SILICON  
TYPES 2N3027 THROUGH 2N3032, AND  
TX2N3027 THROUGH TX2N3032

This amendment forms a part of MIL-S-19500/419(ER), dated 15 March 1969, and is approved for use by the U.S. Army Laboratory Command, Department of the Army, and is available for use by all Departments and Agencies of the Department of Defense.

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3.3.3, delete and substitute:

"3.3.3 Terminal-lead material and finish. The terminal-lead material shall be type K (Kovar) or type F (alloy 52) conforming to requirements in MIL-STD-1276, except that a nickel underplating of thickness, optionally up through 100 microinches maximum, may be used. The terminal-lead finish shall be gold (in accordance with MIL-STD-1276); however, if so specified in the contract or order, the lead material finish may be tin, or tin-coating over gold. This tin-finish requirement shall not be construed as affecting adversely the qualified-product status of the device, or applicable JAN marking (see 6.3a herein).

"3.3.3.1 Selectivity of terminal-lead material. Where choice of lead material (see 3.3.3 above) is desired, stipulation for the particular material shall be made in contract or order (see 6.3b herein)."

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\* 4.3.3, delete and substitute:

"4.3.3 Blocking life test. With the thyristor connected into a circuit setup as follows, the specified dc voltage shall be applied from anode to the gate. A thyristor (TUT) that fails to meet the specified end-point limits shall be considered a failure.

- a. The cathode terminal shall not be connected.
- b. The cell stud temperature shall be maintained at +150°C throughout the specified test time.
- c. A 5-kilohm resistor shall be connected in series with the voltage power supply in order to limit current in event of cell voltage breakdown."

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\* TABLE II, subgroup 4, conditions column: Delete "T<sub>A</sub> = +150°C" and substitute "T<sub>A</sub> = +150°C, +0°C, -3°C".

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6.3, delete and substitute:

"6.3 Ordering data:

- a. Terminal-lead finish: See 3.3.3 herein.
- b. Terminal-lead material: See 3.3.3.1 herein.
- c. Lot-inspection data: See 4.2.7 herein."

The margins of this amendment are marked with asterisks to indicate where changes (additions, modifications, corrections, deletions) from the previous amendment were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous amendment.

CONCLUDING MATERIAL

Preparing activity:  
Army - ER

Agent:  
DLA - ES

(Project 5961-A989)